

REMARKS

This response is offered in reply to the Office Action of September 16, 2003. This Response is believed to be timely without a time extension since no shortened statutory period was set forth under the "Period for Reply" of the office action.

In paragraph 2 of the office action, claims 1 and 5 are rejected under 35 USC 102(b) as anticipated by the Dotan US patent 6 250 802.

Pending claims 1 and 5 are believed to distinguish over the '802 patent. For example, claim 1 now recites a temperature sensor comprising a temperature sensing element whose outer surface is covered with a coating comprising thermally conductive particles in a resin matrix.

With respect to the '802 patent, the examiner will note in Figure 4 thereof that the temperature sensing NTC thermistor 32 has an outer surface that is not covered by a coating, but is partially enclosed in a plastic body 34 that does not resemble a coating such that the NTC thermistor 32 has an outer surface region that contacts the PTC thermistor 33 so as to be heated thereby.

The '802 patent thus is not believed to anticipate pending claims 1 and 5. Reconsideration of the rejection of claims 1 and 5 is requested.

In paragraph 3 of the office action, claims 12-14 are rejected under 35 USC 102(b) as anticipated by the Salera US patent 4 166 451.

Pending claim 12 recites a temperature sensor comprising a temperature sensing element having thereon a relatively thin inner coating having a relatively low thermal diffusivity and a relatively thick outer coating having a relatively high thermal diffusivity.

With respect to the '451 patent, the examiner will note in Figure 7 thereof that the thermistor 17 is located between a metallic tip 11a and a non-metallic material 16 such that patient body heat is directed to the point where the thermistor 17 tangentially contacts the metallic tip 11a. The metallic tip 11a is not an outer coating, but instead comprises a preformed metallic shell joined to plastic header 26 to funnel heat to the point of tangential contact with the thermistor 17. The thermistor 17 is partially enclosed in a non-metallic material 16 that does not resemble an inner coating. Moreover, the non-metallic material 16 "impedes the transfer of heat to the probe metal tube 28" as described at column 3, lines 31-35 of the patent. The '451 patent thus teaches away from including any thermally conductive particles in the non-metallic material 16.

Still further, the metallic tip 11a is shown in Figure 7 of the '451 patent as having a thickness less than that of the non-metallic material 16. This too is in contrast to and teaches away from pending claim 12. The features of claims 13-14 are not disclosed in the '451 patent since the non-metallic material 16 does not resemble an inner coating at all and is provided to impede heat transfer as mentioned above.

The '451 patent thus is not believed to anticipate pending claims 12-14. Reconsideration of the rejection of claims 12-14 is requested.

In paragraph 5 of the office action, claim 7 is rejected under 35 USC 103(a) as obvious in view of the Dotan US patent 6 250 802.

Claim 7 has been amended to recite an intake manifold air temperature sensor disposed on an intake manifold of an internal combustion engine and comprising a thermistor bead having a coating thereon comprising thermally conductive particles in a resin matrix, wherein the coated bead is disposed within the intake manifold.

The '802 patent makes no disclosure whatsoever regarding an intake manifold air temperature sensor disposed on an intake manifold with the coated thermistor bead disposed in the intake manifold as set forth in pending claim 7.

Reconsideration of the rejection of claim 7 is requested.

In paragraph 6 of the office action, claims 3-4 and 9-10 are rejected under 35 USC 103(a) as obvious in view of the Dotan US patent 6 250 802 taken with the Lin US patent 4 581 158.

The rejection is believed to be in error. The deficiencies of the '802 patent are discussed above. The Lin '158 patent is not believed to make up for these deficiencies since the patent nowhere discloses a temperature sensor having any type of coating thereon and thus provides no motivation to use the material of the '158 patent in the '802 patent as proposed by the examiner.

Reconsideration of the rejection of claims 3-4 and 9-10 is requested.

In paragraph 7 of the office action, claims 1-11 and 15 are rejected under 35 USC 103(a) as obvious in view of the Salera US patent 4 166 451 taken with Lin US patent 4 581 158.

The gross deficiencies of the '451 patent are discussed above. As pointed out above, the thermistor 17 of the '451 patent is located between a metallic tip 11a and a non-metallic material 16 wherein the metallic tip 11a is not an outer coating, but instead comprises a preformed metallic shell joined to plastic header 26 to funnel heat to the point of tangential contact with the thermistor 17, and wherein the non-metallic material 16 does not resemble a coating and is provided to impede heat transfer. The '451 patent itself thus teaches away from including any thermally conductive particles in the non-metallic material 16.

The Lin '158 patent is not believed to make up for these deficiencies since the patent nowhere discloses a temperature sensor having any type of coating thereon and thus provides no motivation to use the material of the '158 patent in the '451 patent as proposed by the examiner.

The '451 patent and '158 patent taken alone or together do not suggest the features of pending claims 1-6.

Likewise, the '451 patent and '158 patent taken alone or together do not suggest the intake manifold air temperature sensor of pending claims 7-11.

With respect to claim 15, as pointed out above, the thermistor 17 of the '451 patent is located between a metallic tip 11a and a non-metallic material 16 wherein the metallic tip 11a comprises a preformed metallic shell joined to plastic header 26 to funnel heat to the point of tangential contact with the thermistor 17 and wherein the non-metallic material 16 does not resemble a coating and is provided to impede heat transfer.

Reconsideration of the rejection of claims 1-11 and 15 is requested.

In paragraph 8 of the office action, claims 16-17 are rejected under 35 USC 103(a) as obvious in view of the Salera US patent 4 166 451.

This rejection is believed in error since the thermistor 17 of the '451 patent is housed between a metallic tip 11a and a non-metallic material 16 wherein the metallic tip 11a is not an outer coating, but instead comprises a preformed metallic shell joined to plastic header 26 to funnel heat to the point of tangential contact with the thermistor 17, and wherein the non-metallic material 16 does not resemble a coating and is provided to impede heat transfer.

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Moreover, metallic tip 11a is shown in Figure 7 of the '451 patent as having a thickness less than that of the non-metallic material 16. This is in contrast to and teaches away from pending claims 16-17. The examiner's remarks regarding claims 16-17 are not supported by the '451 patent, which instead teaches away therefrom.

Applicant has added new claim 18 which depends from claim 7 and which recites features not disclosed or suggested by the cited patents.

Although no fee is believed to be due for new claim 18, the Commissioner is authorized to charge any fee in connection with new claim 18 to my deposit account No. 20-1124.

Applicant believes the pending claims 1-18 are in condition for allowance, and action to that end is requested.

Respectfully submitted,




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enclosure: Postal card

#### CERTIFICATE OF MAILING

I hereby certify that this correspondence and enclosures are being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents  
P.O. Box 1450, Alexandria, VA 22313-1450, on January 29, 2004.



Edward J. Timmer